



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,200	01/18/2006	Palaniappan Meiyappan	68144/P020.B	5266
29053	7590	07/22/2008	EXAMINER	
FULBRIGHT & JAWORSKI L.L.P 2200 ROSS AVENUE SUITE 2800 DALLAS, TX 75201-2784				ZEWARI, SAYED T
2617		ART UNIT		PAPER NUMBER
07/22/2008		MAIL DATE		DELIVERY MODE
				PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/534,200	MEIYAPPAN, PALANIAPPAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	SAYED T. ZEWARI	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 06 May 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-29 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

## DETAILED ACTION

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

2. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

3. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-10, and 23-24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-21 of U.S. Patent No. 6751444.

Claims 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 and 12 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claims 2 and 3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 4 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 3 and 14 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 5 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 and 15 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 6 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 5 and 16 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 7 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 6 and 17 of U.S. Patent No. 6751444. The

instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 8 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 7 and 18 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 9 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 8 and 19 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 10 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 9 and 20 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 24 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 10 and 113 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

Claim 23 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 11 and 21 of U.S. Patent No. 6751444. The instant claims are broader in scope than the conflicting claims and thus encompass the subject matter previously patented.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 4-7, 11-14, and 17-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang et al. (US 6,611,506).

With respect to claim 1, Huang discloses a process of allocating carriers in a multicarrier system (**See Huang's col.3 lines 29-31, figure 2, lines 45-47**), the process comprising: determining a location of a subscriber with respect to a base station selecting carriers from a band of multi-carriers to allocate to the subscriber according to the location of the subscriber with respect to the base station (**See Huang's figure 1(18), col.4 lines 52-53, figure 2(s18, s22, and s24), col.6 lines 10-15**); allocating selected carriers to the subscriber (**See Huang's figure 7, col.10 lines 59-61**), and indicating to the subscriber whether or not to adjust transmit power to above its normal transmit power range (**See Huang's figure 1(14), col.4 lines 3-7, lines 13-19**).

With respect to claim 11, Huang discloses an apparatus (**See Huang's figure 1, col.3 lines 29-41**), comprising: a carrier allocator to determine spectral priority based on

information gathered from access requests sent by subscriber units (**See Huang's figure 7, col.10 lines 59-61**) ; and a power control unit coupled to the carrier allocator to indicate a power control range for each of the subscriber units (**See Huang's figure 1(14), col.4 lines 3-7, lines 13-19**).

With respect to claim 18, Huang discloses a method, comprising:  
a subscriber sending an indication to transmit (**See Huang's figure 2(s10), col.5 lines 47-49**) ; and the subscriber receiving an indication of carriers selected based on distance of the subscriber from the base station in relation to other subscribers, the carriers for use in communicating with a base station (**See Huang's, figure 2(s18, s22, and s24), col.6 lines 10-15**).

With respect to claim 22, Huang discloses for communicating between a base station and subscribers (**See Huang's figure 1, col.3 lines 29-41**) comprising:  
comparing interference to adjacent channel leakage power with output power of a subscriber (**See Huang's abstract lines 9-13, figure 2, col.5 lines 57-67, col.6 lines 6-17**), selectively allocating one or more carriers of a band to a subscribers in a multi-carrier system based on results of comparing the adjacent channel leakage power to the output power, wherein one or more subscribers closer to a base station are allocated carriers closer to the band edges of the operating channel and one or more subscribers further from the base station are allocated carriers near or at the center of the operating channel (**See Huang's figure 7, col.10 lines 59-61, abstract lines 9-13, figure 2, col.5 lines 57-67, col.6 lines 6-17**).

With respect to claim 4, Huang discloses a process further comprising:

receiving a request from a subscriber (**See Huang's figure 2, col.5 lines 57-67, col.6 lines 6-17**); calculating a time delay and a path loss associated with the subscriber; and determining transmit power requirements for the subscriber based on the time delay and the path loss (**See Huang's col.1 lines 55-67**).

With respect to claim 5, Huang discloses a process wherein determining transmit power requirements is further based on signal-to-noise-plus-interference ratio (**See Huang's col.1 lines 55-67, col.2 lines 1-4**).

With respect to claim 6, Huang discloses a process further comprising sending a command to the subscriber to use either a normal or extended power control range based on carrier allocation (**See Huang's figure 2, col.5 lines 57-67, col.6 lines 6-17**).

With respect to claim 7, Huang discloses a process further comprising adjusting a power control setting for the subscriber at the base station (**See Huang's col.7 lines 64-67**).

With respect to claim 12, Huang discloses an apparatus wherein the carrier allocator allocates carriers at edges of a band to the nearest subscribers (**See Huang's figure 7, col.10 lines 59-61**).

With respect to claim 13, Huang discloses an apparatus wherein the carrier allocator classifies subscribers into priority groups and allocates carriers to each of the subscribers based on the priority group in which each of the subscribers resides (**See Huang's figure 7, col.10 lines 59-61**).

With respect to claim 14, Huang discloses an apparatus wherein the carrier allocator monitors allocation of the carriers and dynamically reallocates carriers to subscribers (**See Huang's col.4 lines 46-62**).

With respect to claim 17, Huang discloses an apparatus wherein the power control units commands at least one of the subscriber units to extend the power control range of the subscriber (**See Huang's figure 1(14), col.4 lines 3-7, lines 13-19**).

With respect to claim 19, Huang discloses a method further comprising driving up or down subscriber transmit power depending on a location of the subscriber in relation to a base station (**See Huang's figure 1(14), col.4 lines 3-7, lines 13-19**).

With respect to claim 20, Huang discloses a method further comprising receiving a power control command from the base station, and wherein the subscriber drives up or down the subscriber transmit power base on (**See Huang's col.1 lines 65-67**).

With respect to claim 21, Huang discloses a method further comprising receiving a command to use either a normal or extended power control range based on the carriers allocated; and transmitting at a higher power while simultaneously meeting FCC ACPR emission requirements (**See Huang's figure 2, col.5 lines 57-67, col.6 lines 6-17**).

With respect to claim 22, Huang discloses for communicating between a base station and subscribers (**See Huang's figure 1, col.3 lines 29-41**) comprising:

comparing interference to adjacent channel leakage power with output power of a subscriber (**See Huang's abstract lines 9-13, figure 2, col.5 lines 57-67, col.6 lines 6-17**), selectively allocating one or more carriers of a band to a subscribers in a multi-carrier system based on results of comparing the adjacent channel leakage power to the output power, wherein one or more subscribers closer to a base station are allocated carriers closer to the band edges of the operating channel and one or more subscribers further from the base station are allocated carriers near or at the center of the operating channel (**See Huang's figure 7, col.10 lines 59-61, abstract lines 9-13, figure 2, col.5 lines 57-67, col.6 lines 6-17**).

With respect to claim 23, Huang discloses a method wherein the adjacent channel leakage power the PCC Adjacent Channel Leakage Power (ACPR) (**See Huang's abstract lines 9-13, figure 2, col.5 lines 57-67, col.6 lines 6-17**).

With respect to claim 24, Huang discloses a method wherein the carriers being allocated comprise orthogonal frequency-division multiple access (OFDMA) carrier (**See Huang's col.5 lines 24-28**).

With respect to claim 25, Huang discloses a method wherein each carrier being allocated comprise a cluster of orthogonal frequency -division multiple access (OFDMA) carriers (**See Huang's col.5 lines 24-28**).

With respect to claim 26, Huang discloses a method wherein at least one of the one or more carriers comprises a spreading code and the multi-carrier system comprises a code-division multiple-access (CDMA) system (**See Huang's col.5 lines 24-28**).

With respect to claim 27, Huang discloses a method wherein at least one of the one or more carriers comprises an antenna beam in a space-division multiple access (SDMA) system (**See Huang's col.5 lines 24-28**).

With respect to claim 28, Huang discloses a method wherein the multi-cattier system comprises a wireless system (**See Huang's col.3 lines 29-31, figure 2, lines 45-47**).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-3, 8-10, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (US 6,611,506) in view of Hess (US 4,794,635).

Huang discloses everything claimed as applied above to claim 2, except for explicitly reciting a process wherein the closer the subscriber is to the base station the farther away the selected carriers are from the center of the band. In analogous art, Hess discloses a process wherein the closer the subscriber is to the base station the farther away the selected carriers are from the center of the band in order to maximize call assignment (**See Hess' figure 8, col.3 lines 58-65**). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention

of Huang by specifically selecting carriers based on the proximity of subscribers to the base station.

Huang discloses everything claimed as applied above to claim 3, except for explicitly reciting selecting carriers based on the proximity of subscribers to the base station. In analogous art, Hess discloses a process wherein selecting carriers from the band Of multi-carriers comprises: selecting carriers closer to or at the center of the band when the subscriber is far away from the base station (**See Hess' figure 8, col.3 lines 58-65, col.9 lines 34-49**); and selecting carriers farther away from the center of the band when the subscriber is close to the base station (**See Hess' figure 8, col.3 lines 58-65, col.9 lines 34-49**). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Huang by specifically selecting carriers based on the proximity of subscribers to the base station.

Huang discloses everything claimed as applied above to claim 8, except for explicitly reciting selecting carriers based on the proximity of subscribers to the base station allocation based on priority. In analogous art, Hess discloses a process wherein selecting carriers from the band Of multi-carriers comprises: assigning a spectral priority code to the subscriber based on whether the subscriber is near to or far from the base station, and wherein carrier allocation occurs based on the spectral priority code (**See Hess' figure 8, col.3 lines 58-65, col.9 lines 34-49, lines 3-8**). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Huang by specifically selecting carriers based on the proximity of subscribers to the base station and allocating carriers based on priority.

Huang discloses everything claimed as applied above to claim 9 and 10, except for explicitly reciting selecting carriers based on the proximity of subscribers to the base station allocation based on priority. In analogous art, Hess discloses a process wherein selecting carriers from the band of multi-carriers comprises: allocating carriers at the center of the band to the subscriber when the subscriber is assigned a first predetermined spectral priority code (**See Hess' figure 8, col.3 lines 58-65, col.9 lines 34-49, lines 3-8**). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Huang by specifically selecting carriers based on the proximity of subscribers to the base station and allocating carriers based on priority.

Huang discloses everything claimed as applied above to claim 15 and 16, except for explicitly reciting selecting carriers based on the proximity of subscribers to the base station. In analogous art, Hess discloses an apparatus wherein the carrier allocator reallocates carriers closer to the center of the band when a subscriber moves farther away from the base station (**See Hess' figure 8, col.3 lines 58-65, col.9 lines 34-49**). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Huang by specifically selecting carriers based on the proximity of subscribers to the base station.

7. Claim 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (US 6,611,506) in view of well-known prior art (MPEP 2144.03).

With respect to claim 29, Huang discloses a method of allocating carriers in a multi carrier system. Huang, however, does not specifically disclose that the multicarrier system comprises a cable system. However, an official notice is taken that the concept and use of a cable system are well known and expected in the art. Therefore, it would be obvious to one of ordinary skill in the art to incorporate a cable system in a multicarrier system thus providing a more flexibility to the multicarrier system.

### ***Conclusion***

8. The following prior arts made of record and not relied upon are considered pertinent to applicant's disclosure.
9. Haartsen U. S. Patent No. 5491837 discloses a method and system for channel allocation using power control and mobile assisted handover measurements.
10. Frodigh et al. U. S. Patent No. 5726978 discloses an adaptive channel allocation in a frequency division multiplexing system.
11. Meiyappan U. S. Patent No. 6751444 discloses a method and apparatus for adaptive carrier allocation and power control in multi carrier communication systems.
12. Urs et al. U. S. Patent No. 6529488 discloses a multiple frequency allocation radio frequency device and method.
13. Harel et al. U. S. Patent No. 6366195 discloses a power control in two way paging system.
14. Holtzman et al. U. S. Patent No. 6850506 discloses a forward link scheduling in a wireless communication system.

15. Lindroth et al. U. S. Patent No. 5887245 discloses a method and apparatus for regulating transmission power.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAYED T. ZEWARI whose telephone number is (571)272-6851. The examiner can normally be reached on 8:30-4:30.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sayed T Zewari/  
Examiner, Art Unit 2617

July 18, 2008

/Lester Kincaid/  
Supervisory Patent Examiner, Art Unit 2617